



IN THE U.S. PATENT AND TRADEMARK OFFICE

September 19, 2011

Applicants: Jakob MAIER, Jr. et al

For: RETAINING DEVICE FOR TEAT CUPS AND ACTUATOR
FOR INCITING A MOVEMENT OF A TEAT CUP CLUSTER

Serial No.: 10/593 923

Group: 3644

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Commissioner for Patents
P.O. Box 1450
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REPLY BRIEF

Sir:

This Reply Brief is being filed pursuant to the provisions of 37 CFR 41.41 and is directed to arguments raised by the Examiner in the Examiner's Answer.

On page 9, last paragraph to page 10, first paragraph, the Examiner responds to our arguments with regard to the robot shown in Fig. 1 of the Van der Lingen et al reference not being capable of providing mechanical stimulation by stating that the rejection merely sets forth that the Van der Lingen et al reference contains a robotic arm. As the Examiner agrees that there is no disclosure in the Van der Lingen et al reference of the robot providing a rhythmic movement to the teat cup, the Examiner implicitly agrees that there is no disclosure in the Van der Lingen et al reference of the robot providing mechanical stimulation to the teat cup. Despite the representation of the robot shown in Fig. 1, the Van der Lingen et al reference does not provide

any advice to the person skilled in the art suggesting a configuration of the robot beyond its disclosed function of attaching the milking cups to the teats of the cow. The person skilled in the art knows that in order to allow for an efficient and productive milking process it is important to provide a gentle stimulation of an animal to be milked, which is in accordance with the animal's natural biological behavior. The person skilled in the art intending to provide an according stimulation would not consider the robot shown by Van der Lingen et al as modifications of Van der Lingen et al would be required to provide for a stimulation device being capable of inciting a rhythmic movement to the teat cup, as required by the claims under appeal. On page 5, first paragraph, the Examiner even states that Van der Lingen et al does not disclose a stimulation mechanism using a rhythmic movement. Consequently, there cannot be given any motivation for one with ordinary skill in the art to consider modifying Van der Lingen et al in a manner that would yield the presently claimed invention.

On page 10, second paragraph, to page 11, first paragraph, the Examiner responds that the scope of the claims require "a stimulation mechanism that is formed to act mechanically on at least one milk hose that connects a teat cup to the retaining device for inciting a rhythmic movement to the teat cup" and that "claim 80 does not require that hoses transmit mechanical motion". Claim 80 under appeal actually states that the stimulation mechanism of the retaining device is formed to "act mechanically on at least one milk hose that connects a teat cup to the retaining device during the second operational phase, for inciting a rhythmic movement to the teat cup...". Therefore, Claim 80 clearly defines a stimulation mechanism acting mechanically on the milking hoses for inciting a rhythmic movement to the teat cup. In contrast thereto, Maier, Jr. discloses a stimulation system which acts mechanically on the milk hoses via movement of the teat cups as it is acknowledged by the Examiner in his response. In particular, a mere mechanical oscillation is

generated which acts via additional control lines onto the milk cups, the additional control lines being connected to a common milk collecting piece having an independently controllable valve element connected to the additional control lines. According to Maier Jr., the milk collecting piece is arranged via short milk hoses under the animal to be milked during the milking operation closely below the cow's udder. Mechanical oscillation is generated by the independently controllable valve element causing pressure changes which change the length of the additional control lines in order to achieve horizontal displacement of the milking cups. Apparently, the common milk collecting piece is an essential precondition in the stimulation device of Maier in order to generate an oscillation of the milking cups via the additional connecting lines.

In Van der Lingen, a completely new concept for retaining and attaching the milking cups is realized in which a common collecting piece arranged closely below the cow's udder no longer exists, a stimulation mechanism according to Maier cannot, therefore, be implemented in a milking robot according to Van der Lingen, at least not according to the technical implementation suggested by Maier. On page 11, second paragraph to page 12, first paragraph the Examiner sets forth his rejection in that Maier, Jr. discloses a stimulation device which, in the Examiner's opinion, could be properly combined with Van der Lingen. As an explicit example, the Examiner suggests the attachment of a stimulation device according to Maier to element 7 or element 9 of Van der Lingen et al. However, a mere attachment of a stimulating device according to Maier to the structure disclosed by Van der Lingen et al does not result in a practically working stimulating device and is therefore off the point. Especially as Maier teaches the provision of an independently controllable valve element at the common milk collecting piece, the mere suggestion of simply attaching a stimulation device such as the one described by Maier to the elements 7 or 9 of Van der Lingen et al does not at all provide a meaningful

technical teaching of how to form a retaining device as defined by Claim 80 under appeal. An according modification requires the person of ordinary skill in the art to wonder how to arrange and include an independently controllable valve element, additional control lines and a common milk collecting piece in the system disclosed by Van der Lingen et al. Furthermore, the person of ordinary skill in the art is confronted with the problem that due to the long distance between the retaining device and the animal to be milked, accordingly long control lines are necessary. It is clear that long control lines having a greater mass also have greater inertia. A gentle stimulation of the animal to be milked can no longer be achieved then. Therefore, there is no motivation for the person skilled in the art to transfer the teaching of Maier to the milking robot of Van der Lingen.

Reversal of the Examiner is respectfully solicited.

Respectfully submitted,


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